DOCUMENT RESUME

ED 274 642 SP 028 075

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TITLE Approved Initial Teaching Certificate Programs.
INSTITUTION Washington State Council for Postsecondary Education, Olympia.
PUB DATE Jan 85
NOTE 89p.
PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS *Bachelors Degrees; Course Content; Elementary Secondary Education; *Graduation Requirements; Higher Education; Preservice Teacher Education; *State Standards; *Teacher Certification; *Teacher Education Programs
IDENTIFIERS *Washington

ABSTRACT

The Washington State Board of Education requires candidates for teacher certification to hold a bachelor's degree. Most initial certificate earners complete all or most of the certification requirements while they are working toward the degree. The requirements of all the institutions with approved programs in Washington (n=18) have three general features: (1) minimum standards for the overall quality and quantity of student academic work, including a minimum number of college credits and a minimum cumulative grade point average; (2) breadth requirements--usually requiring the student to take a minimum number of credits in a few broadly defined categories; and (3) depth requirements--usually requiring the student to complete a major and, in some institutions, a minor. This document describes: (1) the general requirements for the bachelor's degree; (2) admission, retention, and exit requirements for initial teaching certificate programs; (3) course requirements; and (4) field work requirements. Appended tables identify specific requirements for elementary and secondary certification in each of the 18 teacher education institutions in Washington. Course requirements are listed according to education major or specialization. (JD)

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STATE OF WASHINGTON

COUNCIL FOR POSTSECONDARY EDUCATION

Approved Initial Teaching Certificate Programs

SP 028 075

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January, 1985

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Approved Initial Teaching Certificate Programs

A. General Requirements for the Bachelor's Degree

Most certification authorities insist on the importance of distinguishing between baccalaureate degree and certification requirements. The completion of a degree, they point out, is not an automatic guarantee of a student's ability to perform adequately as an elementary or secondary school teacher.

Nevertheless, the State Board of Education requires candidates for certification to hold the bachelor's degree. And, at this time, most initial certificate earners complete all or most of the certification requirements while they are working toward the degree. Therefore, baccalaureate programs are both part of the minimum requirements for certification and a context or set of constraints within which certification programs are necessarily designed.

The details of any specific institution's requirements for the baccalaureate degree are usually very complicated. But the requirements of all the institutions with approved programs in Washington have three general features:

1. Minimum standards for the overall quantity and quality of student academic work. These include a minimum number of college credits and a minimum cumulative grade point average.
2. Breadth requirements. These usually require the student to take a minimum number of credits in a few broadly defined categories.
3. Depth requirements. These are requirements to complete a major and in some institutions a minor.

Overall quantity and quality requirements. As indicated in Table 1, the minimum number of credits for the bachelor's degree at any institution with an approved program is 180 quarter hours or its equivalent in semester hours (1 sem. hr. = 1.5 q. hr.) or semester course credits (1 sem. course = 5 q. hrs. at Whitworth and 6 q. hrs. at University of Puget Sound). Seven of the 16 institutions, including all five public institutions, require 180 q. hrs. The other requirements range from 186 q. hrs. at Whitman to 192 q. hrs. at Gonzaga, Pacific Lutheran, University of Puget Sound, and Walla Walla College. Only two institutions, Seattle University, and Northwest College (190 q. hrs.) generally require more credits for education students than for students in other programs (180 q. hrs. at Seattle University and 183 q. hrs. at Northwest). However, as we shall see, it is in some few instances impossible to meet certification program requirements within the minimum graduation requirements.

All of the 16 institutions require a minimum cumulative g.p.a. of 2.0 for all bachelor's degrees. In many instances, certification program requirements exceed these university-wide minimums.

Breadth requirements. These requirements for certification candidates are summarized in Table 1. In 14 of the cases, these requirements are largely identical with university-wide standards for all degree programs. At the University of Washington, the standards are specific to the college in which the students are enrolled; that is, there are no university-wide requirements. The requirements at Gonzaga include distinctive requirements for special education and physical education majors only. In several cases, education students are required to take particular courses to meet the requirements.

Table 1. Summary of General University Course Requirements for the Bachelor's Degree for Education Students.

	Units of Credit Used[a]	Total Credits for Graduation	Specific Course Credit Requirements										Total Specific Course Requirements[h]	
			Literacy[b]		Arts and Humanities[c]		History and Social Science[d]		Mathematics and Science[e]		Others/ Unclassifiable[f]			
			Min[g]	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Central Washington University	QH	180	12	12	15	15	15	15	20	20	2	2	64	64
% of Total Credits		100%	7%	7%	8%	8%	8%	8%	11%	11%	1%	1%	36%	36%
Eastern Washington University	QH	180	0	15	12	17	12	16	12	20	0	4	44	64
% of Total Credits		100%	0%	8%	7%	9%	7%	9%	7%	11%	0%	2%	24%	36%
University of Washington	QH	180	0	15	20	20	20	20	20	35	0	15	60	105
% of Total Credits		100%	0%	8%	11%	11%	11%	11%	11%	19%	0%	8%	33%	58%
Washington State Univ. Elementary and non- A. & S. Secondary	SH	120	6	6	6	6	6	6	10	10	0	0	28	28
% of Total Credits		100%	5%	5%	5%	5%	5%	5%	8%	8%	0%	0%	23%	23%
Arts & Science Secondary	SH	120	6	6	6	15	6	15	12	12	2	10	41	49
% of Total Credits		100%	5%	5%	5%	13%	5%	13%	10%	10%	2%	8%	34%	41%
Western Washington University	QH	180	3	13	10	28	17	35	7	23	0	0	55	81
% of Total Credits		100%	2%	7%	6%	16%	9%	19%	4%	13%	0%	0%	31%	45%
Gonzaga University--A. & S. majors	SH	128	7	7	23	23	12	12	10	10	0	0	52	52
% of Total Credits		100%	5%	5%	18%	18%	9%	9%	8%	8%	0	0%	41%	41%
P.E. and Special ed. majors	SH	128	7	7	23	23	9	9	7	7	2	2	48	48
% of Total Credits		100%	5%	5%	18%	18%	7%	7%	5%	5%	2%	2%	38%	38%
Heritage College	SH	126	9	9	9	9	9	9	9	9	0	0	36	36
% of Total Credits		100%	7%	7%	7%	7%	7%	7%	7%	7%	0%	0%	29%	29%
Northwest College	QH	190	9	18	20	29	15	15	15	15	5	14	73	73
% of Total Credits		100%	5%	9%	11%	15%	8%	8%	8%	8%	3%	7%	38%	38%
Pacific Lutheran University	SH	128	4	4	16	16	8	8	8	8	12	12	48	48
% of Total Credits		100%	3%	3%	13%	13%	6%	6%	6%	5%	9%	9%	38%	38%
St. Martin's College	SH	120	9	9	12	12	6	6	7	8	2	2	36	37
% of Total Credits		100%	8%	8%	10%	10%	5%	5%	6%	7%	2%	2%	30%	31%
Seattle Pacific University	QH	180	6	12	40	40	19	19	10	10	0	0	75	81
% of Total Credits		100%	3%	7%	22%	22%	11%	11%	6%	6%	0%	0%	42%	45%

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Table 1. (cont.) Summary of General University Course Requirements for the Bachelor's Degree for Education Students.

	Units of Credit Used[a]	Total Credits for Graduation	Specific Course Credit Requirements										Total Specific Course Requirements[h]	
			Literacy[b]		Arts and Humanities[c]		History and Social Science[d]		Mathematics and Science[e]		Others/ Unclassifiable[f]			
			Min[g]	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Seattle University	QH	190	5	5	30	30	15	15	10	10	0	0	60	60
% of Total Credits		100%	3%	3%	16%	16%	8%	8%	5%	5%	0%	0%	32%	32%
University of Puget Sound	SC	32	2	2	3	3	3	3	3	3	0	0	11	11
% of Total Credits		100%	6%	6%	9%	9%	9%	9%	9%	9%	0%	0%	34%	34%
Walla Walla College	QH	192	8	16	28	36	12	20	12	16	2	22	74	86
% of Total Credits		100%	4%	8%	15%	19%	6%	10%	6%	8%	1%	11%	39%	45%
Whitman College	SH	124	0	6	14	26	0	18	6	12	4	10	48	48
% of Total Credits		100%	0%	5%	11%	21%	0%	15%	5%	10%	3%	8%	39%	39%
Whitworth College	SC	38	1	1	4	4	1	1	2	2	3	5	11	13
% of Total Credits		100%	3%	3%	11%	11%	3%	3%	5%	5%	8%	13%	29%	34%
Average Percentage of Total Credits			4%	6%	11%	13%	7%	9%	7%	9%	2%	4%	34%	38%
Lowest Percentage Required			0%	3%	5%	5%	0%	3%	4%	5%	0%	0%	23%	23%
Highest Percentage Required			8%	9%	22%	22%	11%	19%	11%	19%	9%	13%	42%	58%

[a]QH = quarter hours; SH = semester hours; SC = semester course credits.
[b]Literacy courses include those in writing and communication.
[c]Arts and humanities include courses in literature, art, music, philosophy, religion, and related fields.
[d]History and social science include courses in history, psychology, sociology, anthropology, economics, geography, and related fields.
[e]Math and science include courses in mathematics, biology, chemistry, physics, and related fields.
[f]This category includes courses in physical education, foreign language, and education as well as requirements that are interdisciplinary or so general that they cannot be classified in a specific disciplinary category.
[g]Differences between the minimum and maximum requirements in any category may result from flexibility in the requirements, differences in credit for courses that satisfy the requirements, or requirements that depend upon students' high school background or their performance on placement examinations.
[h]Because some specific field requirements are flexible, the total minimum and maximum requirements may not be equal to the sum of the minimums or maximums in the five fields.

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In order to include the requirements of all institutions in a single table, the requirements were classified in five broad categories -- literacy, humanities, history and social science, mathematics and science, and others. This classification inevitably masks a greal deal of the richness and specificity of the requirements at any particular institution.

It was also necessary to indicate a maximum and a minimum number of credits required in each category. Some institutions allow students to "test out" of certain requirements either by passing a placement examination or by satisfactory achievement in high school courses. Some also allow students a certain degree of flexibility in meeting the requirements. Eastern Washington University, for instance, requires at least 44 q. hrs. of credit with a minimum of 12 q. hrs. each in humanities, social science, and math/science. The remaining eight hours may be taken in any two of these three categories.

In any case, the indicated minimums are absolute. Thus one can be assured, for instance, that any current graduate of Eastern Washington will have taken at least 12 q. hrs. of humanities courses.

Several general observations about these requirements may be made:

- Students on average spend roughly a third of their total time in college meeting these breadth requirements with no one spending less than about one fourth of his or her total time.
- All students must meet basic literacy requirements either by satisfactory college course work or by "testing out" of such requirements.
- All students must take at least some college course work in the humanities and in math/science.

- Students at all institutions but one are required to take course work in history/social science.
- Despite these commonalities, the general university course requirements vary considerably from one institution to another.

B. Admissions, Retention, and Exit Requirements for Initial Teaching Certificate Programs

Appendix A includes an updated version of material originally compiled by the Washington Council of Deans and Directors of Education and summarizes the admissions, retention, and exit requirements for each of the 16 institutions with approved initial teaching certificate programs. Again, because of the need to use a uniform format, some of the detail of those requirements has been lost. In addition, because these standards are under review, many of them may change in the near future. Several general observations may be made about the admissions requirements:

- All approved programs' admissions requirements include both minimum performance in college work and on special examinations.
- Since 1980, at least 11 institutions, including all five public institutions, have increased their admissions standards.
- All 16 institutions require a minimum overall gpa or gpa in the general university course requirements for admission to teacher preparation.
- All of the institutions set the general gpa admission requirement above the institution's cumulative gpa requirement for graduation.
- All institutions require admitted students to pass some form of test in the use of written English.

- Six institutions require a minimum performance in a college English course.
- 14 of the 16 institutions require admitted students to pass some form of test in mathematics.
- One of the remaining two institutions requires a minimum performance in a specific college mathematics course for admission; the other requires satisfactory completion of a college mathematics course for elementary students to exit from the program.
- Three institutions permit students who do not attain minimum scores on English or mathematics tests to demonstrate basic skills in alternative ways (minimum performance in college English courses at Eastern Washington University and Washington State University, in a college mathematics course at Washington State University, and in reading, spelling, and math "labs" at Seattle Pacific University).

The <u>retention</u> and <u>exit</u> requirements tend to focus on college achievement:

- All institutions implicitly require satisfactory completion of certification program, major, and other baccalaureate degree requirements.
- All students who complete the certification program simultaneously with the bachelor's degree have to meet minimum gpa requirements in the major and in all college work either through explicit program requirements or through the institution's general graduation requirements.
- Ten of the 16 institutions require a higher cumulative gpa for certification than that generally required for the bachelor's degree.
- Seven institutions require a higher gpa in the major than is generally required for the bachelor's degree.

- Twelve institutions require specified minimum grades or averages in required education courses.
- None of the institutions administers a written test as an exit requirement.
- All institutions implicitly require satisfactory completion of student teaching as judged by the university supervisor.

C. Course Requirements

There are nearly 600 SBE-approved teaching endorsement programs at 16 institutions in Washington. While many programs at an institution share some similar requirements, there are significant differences among programs even at the same level of endorsement. At Central Washington University, for example, with 26 permissable majors and two main options in the teaching core, there are at least 52 distinct courses of study which a student might pursue in order to become an elementary school teacher.

To make this analysis manageable, therefore, it has been necessary to focus on particular programs from among the multitude offered. At the elementary level, two programs from each institution were selected -- one involving a major in eduation or a specifically teaching-oriented field and one including a major in English or language arts. These two programs are representative of the two categories of majors permitted for elementary teachers by the State Board, an academic field or a teaching specialization. Five secondary programs at each institution were selected for analysis -- programs with majors in biology, English, history, mathematics, and social studies. These five programs represent what are generally viewed as "solids" in the secondary school curriculum. In addition, these

appear to be among the most frequently taught subjects in Washington secondary schools. Finally, although not every institution offers a program in these subjects, they are among the most frequently offered programs.

Appendix B includes statistical analyses of each of these seven programs at the sixteen institutions. There are two tables for each program. The first analyzes <u>all</u> the required course work in the program, including that in the major, required minors, professional teaching core, and general university course requirements. The second analyzes in greater detail the education-related course work identified in the first table.

Several things should be noted in reading and interpreting these tables:

1. These figures represent the absolute <u>minimum</u> of course work needed to meet the requirements. When possible, courses that meet more than one requirement were selected -- courses in the major or minor that would meet, for instance, ethnic studies requirements in the teaching core or general university course requirements. It was also assumed that the minimum general university course requirements were applicable. Depending, then, on a particular student's educational background or on his/her specific course selections, it may take considerably more college work to meet the requirements.
2. To prevent confusion, courses taken to meet requirements in left-hand columns that also meet requirements in subsequent columns are <u>omitted</u> from the totals in those subsequent columns.
3. The totals for education-related course work are <u>maximums.</u> That is, if appropriate education-related courses are available to meet <u>any</u> of

the major, minor, teaching, or general requirements, those courses were assumed to be included. In some cases, then, students may be able to meet the requirements with less education-related and more non-education course work.

A great deal of information is included in these tables. In order to look for some general patterns in the data, it may be useful to compare only the averages for each type of program. The average overall requirements for all seven programs are summarized in Table 2.

Several observations are appropriate:

- About 90% of an undergraduate's time is spent meeting the specified requirements for the degree and the certificate. At least one program in four of the seven program areas exceeds 100% of minimum graduation requirements.
- The remaining 10%, representing just over one full-time quarter term, is all the student has available for intellectual and career exploration through free electives.

Table 2. Average Overall Program Requirements as a Percentage of Total Graduation Requirements.

	Education-Related Courses	Non-Education Courses	Total
Elem. Ed. Specialization	51%	38%	89%
Elem. cert. with English major	38%	51%	89%
Sec. cert.--biology major	26%	65%	92%
Sec. cert.--English major	30%	58%	88%
Sec. cert.--history major	26%	62%	88%
Sec. cert.--math major	28%	61%	88%
Sec. cert.--soc. studies major	28%	66%	95%

- The exploration possible through the general university course requirements is somewhat more restricted for education students than

for others because education students, especially at the elementary level, are often required to take specific courses to meet those requirements.

- Elementary programs require students to spend at least a third of their undergraduate careers in professionally oriented course work. Some require much more, almost two-thirds in some cases.
- Secondary programs require students to spend about one-fourth of their time, the equivalent of a year of full-time study, in professionally oriented course work. Some require as much as 40% of a student's time in professional study.

Table 3 summarizes the way in which the required education course work is distributed in the different programs. Again, certain patterns can be discerned:

- The major difference between elementary and secondary programs lies in the number of curriculum and teaching methods courses required. Elementary programs in general include twice as many of these courses.
- Elementary programs consistently include teaching content courses, courses in subject matter designed for teachers and taught by non-education faculty.
- Secondary programs tend not to include teaching content courses although these courses are more readily available at some institutions than others.
- Student teaching represents the single largest category of professional preparation in secondary programs, accounting for about a third of the education course requirements. Student teaching represents

Table 3. Education Course Requirements -- Averages in Seven Program Categories.

Program	Course Requirements as a Percentage of Total Credits for Graduation					
	Content for Teachers[a]	Foundations and Others[b]	Ed. Psych. and Human Development[c]	Curriculum, Materials and Methods[d]	Field Work Courses[e]	Student Teaching[f]
Elementary Ed. Specialization	4%	6%	7%	21%	4%	10%
Elementary Cert. with English major	4%	3%	5%	14%	3%	8%
Secondary Cert. with Biology major	0%	3%	5%	7%	3%	9%
Secondary Cert. with English major	1%	3%	5%	9%	3%	9%
Secondary Cert. with History major	0%	3%	5%	6%	3%	9%
Secondary Cert. with Math major	1%	3%	5%	7%	3%	9%
Seconary Cert. with Social Studies major	1%	4%	5%	8%	2%	9%

[a]Subject matter courses, usually taught outside education departments, that are listed as specifically intended for prospective teachers. Most frequently mathematics and English courses.
[b]General introductory courses; courses in the social, philosophical, and historical foundations of education; and occasionally courses not classifiable in any other category.
[c]Required courses in psychology, whether or not they are taught within education departments.
[d]Courses in the design of instruction and in general and subject-matter-specific methods of teaching.
[e]Courses specifically and primarily focusing upon practical work with students, in schools, or in other agencies serving school-age children. Required courses listed in other categories may include field work.
[f]Courses involving students' full-time participation in schools, usually the culminating requirement of the teacher preparation sequence.

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only about a fifth of the professional preparation of elementary teachers.

- These averages conceal one important difference, perhaps the major difference, among institutions' programs. Four universities -- Central Washington, Seattle Pacific, the University of Washington and Western Washington -- offer extended field experience programs in which students spend from half to all of their time in schools for at least two quarters. These programs also include the offering of college courses at the field sites. At Central and Western these extended field programs are options; at Seattle Pacific and the University of Washington, they are mandatory for all students.
- The disciplinary study of education -- its history, sociology, economics, and philosophy -- represents a very small part of teacher preparation, usually one general course if it is required at all.

Additional subject endorsements. Students can become certified to teach particular subjects at the secondary level not only by majoring in those subjects but also by completing a supporting endorsement program while majoring in another subject. Table 4 summarizes the requirements of these supporting endorsement programs for each of the five subjects under study here. Because these programs may be completed by already certified teachers who wish to add an endorsement to their certificates, the requirements are reported in credit hours or course credits rather than in percentage of graduation requirements. To facilitate comparisons, average requirements for the major in these subjects, translated into quarter hours, are reported in Table 5.

Table 4. Requirements for Endorsement in Additional Secondary School Teaching Subjects[a]

Institution	Unit of Credits[b]	Teaching Subjects															
		Biology			English			History			Mathematics			Social Studies		
		Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total
Central Washington University	QH	5	35	40	3	20	23	0	20	20	6	27	33	--	--	--
Eastern Washington University	QH	0	20	20	4	19	23	0	18	18	6	19	25	0	24	24
University of Washington	QH	0	29	29	8	25	33	3	30	33	15	18	33	--	--	--
Washington State University	SH	3	15	18	3	15	18	3	18	21	0	16	16	3	18	21
Western Washington University	QH	0	25	25	4	20	24	0	35	35	4	28	32	3	29	32
Gonzaga University	SH	3	20	23	3	20	23	3	20	23	3	20	23	3	20	23
Heritage College	SH	--	--	--	2	16	18	--	--	--	--	--	--	0	16	16
Pacific Lutheran University	SH	--	--	--	6	12	18	2	16	18	2	18	20	2	16	18
St. Martin's College	SH	0	16	16	0	16	16	0	16	16	0	16	16	0	16	16
Seattle Pacific University	QH	0	20	20	0	20	20	0	20	20	0	20	20	--	--	--
Seattle University	QH	0	30	30	10	15	25	0	35	35	0	30	30	--	--	--
University of Puget Sound	SC	0	5	5	0	5	5	0	6	6	--	--	--	--	--	--
Walla Walla College	QH	0	27	27	6	27	33	0	28	28	0	28	28	--	--	--
Whitman College	SH	0	16	16	0	18	18	0	20	20	0	16	16	--	--	--
Whitworth College	SC	0	5	5	1	4	5	0	5	5	1	6	7	--	--	--
Average[e]	QH	1	26	27	4	23	27	1	27	28	3	24	27	2	26	28
Lowest[e]	QH	0	20	20	0	15	20	0	18	18	0	18	20	0	24	24
Highest[e]	QH	5	35	40	10	30	34.5	4.5	36	36	15	30	35	4.5	30	34.5

[a]These are minimum requirements either for students completing initial secondary certification programs with majors in other subjects or for already certified teachers who wish to be recommended for additional endorsements.

[b]QH = Quarter Hours, SH = Semester Hours, SC = Semester Course Credits.

[c]These are courses offered by education departments or those offered by other departments which are described as being for teachers or about education. When the requirements permit student choice, education courses if offered and appropriate to the program were selected.

[d]These are courses which do not qualify as education courses as defined above. This is the minimum number of non-education courses needed to meet each institution's requirements.

[e]For these calculations, semester hours and semester course credits were translated into quarter hours. 1 SH = 1.5 QH. Whitworth 1 SC = 5 QH; University of Puget Sound 1 SC = 6 QH.

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Table 5. Average Major Requirements in Five Subjects, Expressed in Quarter Hours.

	Major				
	Biology	English	History	Math	Social Studies
Average Requirements					
Education	2	7	2	3	2
Non-Education	66	50	57	52	71
Total	68	57	59	55	73
Lowest Requirements					
Education	0	0	0	0	0
Non-Education	41	31	45	35	48
Total	45	45	45	45	48
Highest Requirements					
Education	9	17	6	12	5
Non-Education	105	72	66	81	127.5
Total	105	72	70	81	127.5

Here, too, several observations are in order:

- On the average, it takes a little less than the equivalent of two quarters of full-time study in a subject to add that endorsement to one's certificate. The averages range from 27 to 28 q. hrs. Two full-time quarters are equal to approximately 30 q. hrs.
- At some institutions, however, considerably less work is required, as little as 18 to 20 q. hrs. or slightly more than one full-time quarter of study.
- On the average, a little less than half of the college work is required for the supporting endorsement than is required for the major.
- The percentage of course work required for the supporting endorsement compared with that for the major varies considerably among the institutions. For supporting endorsement in biology, for example, Central

requires nearly 90% as much work as the major whereas Eastern requires only about 30% as much work as the major.

- The averages for supporting endorsements do not follow the same patterns as those for the major. That is, while majors in biology and social studies generally require significantly more course work than majors in the other three subjects, supporting endorsement programs require about the same amount of work in all subjects.
- Both majors and supporting endorsements require about the same amount of education-related course work in each subject.
- Endorsement in additional subjects is generally believed to enhance a student's employment prospects, especially in small schools, and many institutions actively encourage their students to complete supporting endorsement programs.
- The State Board's teacher assignment policy, which requires current initial and new continuing certificate qualifiers to be assigned only in their areas of endorsement, is likely to increase the demand for secondary teachers with multiple endorsements.

D. Field Work Requirements

This report has already touched briefly on the field work required in approved initial teaching certificate programs. We have seen that, on the average, students devote about 9% of their baccalaureate program to student teaching and about 3% of their program to specific field work courses. However, at many institutions field work is not done exclusively in such special courses. Rather, it is integrated into a variety of other courses -- general introductory, methods, and sometimes psychology courses.

To understand current field work requirements, then, it is necessary to look beyond the general types of courses that students take to the specific requirements of these courses. Extended visits to the campuses of the five public institutions were undertaken primarily to collect data on students who had completed teacher certification programs. These visits also provided the opportunity to collect more detailed information about the required field work. The omission of independent institutions from this analysis is a result of the limited time and resources available for data collection and not of those institutions' unwillingness to be involved. At the same time, however, the public institutions enroll over 70% of the initial certificate earners trained in Washington. Therefore, this analysis does deal with a substantial portion of the state's teacher preparation system.

Time spent in the field. Common sense and research both suggest that well-supervised time in schools, with children, and engaged in teaching responsibilities is an important ingredient in good teacher preparation programs. Thus the amount of time spent in the field is at least one rough indication of the appropriateness of the teacher preparation curriculum. Table 6 summarizes for public institutions the minimum field requirements in the two elementary and five secondary programs analyzed in this report. Two cautions should be borne in mind in interpreting this table:

1. These are minimum requirements. All five institutions offer a variety of elective opportunities for additional field work.
2. Field work taken before student teaching takes a variety of different forms in different institutions and programs.

Table 6. Hours Spent in Field Work[a] in Seven Certification Programs[b] at Five Public Institutions.

Institution	Certification Program: Elem. Ed. Spec.	Elem. English Major	Sec. Biology Major	Sec. English Major	Sec. History Major	Sec. Math Major	Sec. Soc. St. Major
Central Washington University -- Campus-based							
Before student teaching[c]	120	120	120	180	120	240	120
Student teaching[d]	300	300	300	300	300	300	300
Total	420	420	420	480	420	540	420
Central Washington University -- Field-based							
Before student teaching	240	240	240	300	240	360	240
Student teaching	300	300	300	300	300	300	300
Total	540	540	540	600	540	660	540
Eastern Washington University --							
Before student teaching	165	115	115	115	115	115	115
Student teaching	330	330	330	330	330	330	330
Total	495	445	445	445	445	445	445
University of Washington --							
Before student teaching[e]	360	360	240	240	240	240	---
Student teaching	300	300	300	300	300	300	---
Total	660	660	540	540	540	540	---
Washington State University --							
Before student teaching	195	135	75	75	75	75	75
Student teaching	240	240	240	240	240	240	240
Total	435	375	315	315	315	315	315
Western Washington University -- Campus-based							
Before student teaching	92	12	0	0	0	0	0
Student teaching	300	300	300	300	300	300	300
Total	392	312	300	300	300	300	300
Western Washington University -- Field-based							
Before student teaching	332	312	300	300	300	300	300
Student teaching	300	300	300	300	300	300	300
Total	632	612	600	600	600	600	600
Averages							
Before student teaching	222	190	152	164	152	176	130
Student teaching	294	294	294	294	294	294	293
Total	516	484	446	458	446	470	423

[a] Hours reported are those actually spent in the field. Preparation time is not included.
[b] These are the same programs analyzed in previous tables.
[c] Includes field observation, tutoring students, assisting teachers, work with small groups of students, and in some cases, instructing full classes of students. Most of this work takes place in schools, but it may also include some work with college students in need of special assistance.
[d] For the sake of comparability, each week of full-time student teaching is considered to consist of 30 hours in the field.
[e] Excludes the program admission requirement of prior successful experience with children, which may be met through the student's own work or volunteer experience or by taking Education 301 which includes 60 hours of field work.

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Several observations can be made about these requirements:

- The field-oriented programs including that at the University of Washington and the field-based options at Central and Western clearly provide much more field experience than the other programs, on the average nearly 200 more hours, or roughly six full 30-hour school weeks.
- All programs, except the campus-based option at Western, require students to spend a reasonably large amount of time in field work before they enter student teaching, at least 75 hours.
- On the average, elementary programs require more pre-student-teaching field work than secondary programs do, roughly 50 hours more. This is not the case at all institutions, however.
- Elementary education majors/specialists spend somewhat more time in the field than elementary teaching candidates with non-education majors. Again, however, this is not the case at two institutions.
- On the average, elementary teachers-in-training spend altogether the equivalent of about 17 full-time weeks in the field. This total ranges, however, from a low of about 10 weeks to a high of about 22 weeks.
- On the average, secondary teachers spend the equivalent of about 15 full-time weeks in the field, ranging from about 10 to about 20 weeks.

Activities in the field. The primary differences in the types of activities which students carry out in the field are those attributable to whether or not the program is field-oriented. There are some other differences, however.

The field-based programs at Central and Western involve two quarters of work at a field site. That at the University of Washington involves four quarters for elementary teachers and three quarters for secondary teachers. At Western and the University of Washington the field quarters are consecutive and usually take place at a single field site. At Central, they are not consecutive and are not necessarily in the same school. In all three cases, the final quarter consists of full-time student teaching. During the prior quarter(s), in addition to working in the classroom, students are taking required education courses, offered at the school by university faculty. There are at least two major advantages to the field-oriented approach. Obviously, student teachers have a more sustained opportunity to understand the students with whom they work and to develop their own teaching abilities. Under this arrangement, students are prepared to accept fuller and more immediate teaching responsibilites during the student teaching quarter. In addition, students and faculty can make more direct application of the other education courses that are taken simultaneously with field responsibilities. In fact, these courses often include specific assignments to be completed in the field.

All the other campus-based programs expect students in pre-student-teaching field work to receive a general orientation to the practical work of the teacher. The opportunities for sustained development of teaching skill in these short-term and very part-time assignments are limited, however. All the field work in Central's campus-based secondary program and about half of it in Washington State's secondary program take place outside the usual academic year. Therefore, opportunities for cross-fertilization between field work and other education course work are

restricted. To encourage this cross-fertilization, Eastern has recently modified its program to include a limited field component in several of its required courses.

All programs have similar expectations for student teaching -- the student's gradual acceptance of additional teaching responsibility until he or she takes on a teacher's full load for some limited period, ranging from three to six weeks. In addition students are required to participate in the teacher's responsibilities outside the classroom, such as attending faculty meetings. Finally, students are encouraged to observe teachers other than their cooperating teachers. Students are expected to document all their activities including especially their plans for all lessons taught.

Field supervision. All students' field activities are supervised by both university supervisors and the teachers with whom the students work. Observations on supervision by cooperating teachers include:

- Most students are placed in schools and districts with which the universities have long-standing arrangements.
- While there are a variety of mechanisms for placing particular students with particular teachers, the decision usually is made cooperatively by university supervisors, school administrators, and the school teachers involved.
- The stability and formality of arrangements necessary for the extended field experience programs appear to provide the universities with greater input into the placement decisions than is the case with the campus-based programs, especially for the field work prior to student teaching.

- The operation of a university laboratory school at Eastern, the only such school among the five public institutions, gives the university direct and explicit control over the field work of students and of the teacher supervision provided.
- Cooperating teachers receive little or no compensation for their assistance to students. There is usually no stipend for working with students prior to student teaching. Stipends for work with student teachers range from nothing at Western to $60 at Eastern and the University of Washington.
- Education deans were generally agreed that current payments to cooperating teachers are not effective incentives but were divided on the question of whether additional incentives are necessary or the form that such incentives might take.
- Training provided to cooperating teachers is informal. It includes the sending out of written materials that describe the universities' policies and expectations for student teaching and supervision and discussions between university supervisors and cooperating teachers. More formal arrangements at Western and Central have been discontinued for financial reasons.
- Written communication to cooperating teachers includes descriptions of expected patterns of activity for student teachers and for their observation and evaluation by cooperating teachers. Deans indicated that most cooperating teachers were conscientious in their compliance with these expectations.

Observations on college supervisors include:

- There are three basic patterns for university supervision at the five public institutions:
  - -- At Central, Washington State, and Eastern most supervision is done by individuals with regular faculty status whose primary assignment is supervision.
  - -- At the University of Washington, supervisors are non-faculty; they are experienced school teachers usually supervising part-time.
  - -- At Western, there are 2.5 FTE non-faculty supervisors, but the majority of supervision is done by regular faculty as part of their teaching load.
- All universities maintain written descriptions of the responsibilities of university supervisors. These are provided to the supervisors, students, and cooperating teachers.
- All universities expect a minimum number of supervisory visits during student teaching.
  - -- At Eastern and Central supervisors visit students weekly.
  - -- At Western, weekly visits are the optimum, but a minimum of six visits is required.
  - -- At Washington State, six visits are usually made, but a minimum of three visits is required.
  - -- At the University of Washington, a minimum of three observations of a student's teaching is required in each of the last two quarters of field work for secondary teachers and three quarters for elementary teachers.

- Supervisors are expected to visit more frequently those students who are having difficulties.
- All universities maintain policies on the optimum full-time supervision load: Central -- 16; Eastern -- 18; U.W. -- 25; W.S.U. -- 16; Western -- 16. These optimums are sometimes exceeded if the need arises.
- The <u>minimum</u> number of supervisory visits on an optimum load, excluding those necessary for problem cases, ranges from 75 to 180 during the ten to twelve weeks of student teaching. During these visits, the supervisor must observe the student and confer with both the student and the cooperating teacher.

All the deans of education at the public institutions expressed some concern about their current systems for supervising students' field work. Many were concerned about the adequacy of funding for field supervision. Several institutions have proposed, are considering, or are experimenting with alternatives to current procedures.

- Dr. Kaltsounis, Associate Dean for Undergraduate and Professional Studies at the University of Washington, has proposed a system in which cooperating teachers are selected, trained, and paid by the universities to be the sole supervisors of student teachers.
- Dr. Katz, Dean of Eastern's School of Human Learning and Development, has proposed increased compensation of cooperating teachers judged by the University not to need assistance from a university supervisor.
- Washington State University is experimenting with a system in which principals in rural schools take on the responsibilities of the university supervisor of student teaching.

- Western and Central in their 1985-87 budget requests have both proposed demonstration projects in which formal and extensive relationships with specific public schools would be established. University faculty would provide training to teachers in the designated schools and cooperate in the redesign of the school's curriculum. These schools would then become permanent sites for extensive student field work.

Evaluation of student field work. All five public institutions have published policies and procedures for the formal evaluation of student teachers:

- Each institution has developed its own observational evaluation instrument for use by the university supervisor. These instruments all emphasize the state's generic competencies for teachers but differ in their organization and the specific indicators of good teaching which they stress.
- All institutions require the use of this instrument at least twice during student teaching, once at midterm and once at the end of the term. The final evaluation forms the basis of the institution's ultimate judgment of a student's meeting the generic competency requirements.
- In the extended field work programs, students are formally evaluated twice during each quarter in the field.
- Although specific data are not available, all institutions indicated that some student teachers are judged unsatisfactory in the field.
- The State Board of Education has recently authorized the development of a uniform observational evaluation instrument to be used in the evaluation of all student teachers in all approved programs.

Appendices

Appendix A

REQUIREMENTS FOR TEACHER EDUCATION

College/University	Admissions Requirements: College Achievement and Other	Admissions Requirements: Basic Skills	Retention Requirements	Exit Requirements
Central Washington University	1. 2.5 gpa in all general education courses. (In fall 1985, cum. gpa at or above all-campus average gpa.) 2. Successful completion of English 101 and 201. 3. Test of Handwriting (legibility).	Comprehensive Test of Basic Skills, Form U (McGraw/Hill): (a)English usage raw score of 50. (b)Spelling-raw score of 20. (c)Reading-raw score of 28. (d)Math (computation)-raw score of 39.	1. Must maintain a cumulative gpa of 2.5. 2. Must maintain a 2.5 in major and minor academic areas.	2.5 cumulative, major, and minor gpa.
Eastern Washington University	1. Must earn 2.5 in Education 201, Introduction to Education; Applied Psychology 302, Educational Psychology; and a course in multicultural education and sex equity. 2. Cumulative gpa 2.5; 2.5 gpa in major/minor courses completed.	1. Math dept. test (70 percentile). 2. Speech & Hearing dept. test (70 percentile). 3. English composition (a)combination of superior performance on Washington Pre-College Test and superior writing performance in diagnostic essays by English dept or (b)a grade of 2.0 or better in one or more composition classes.	1. Completion of at least two-thirds of major with minimum gpa of 2.5. 2. Minimum 2.5 gpa with no individual course grade below 2.0 in specified education courses. 3. Successful interview with Professional Candidacy Committee. 4. Two letters of recommendation from college faculty members.	1. Completion of all professional education courses and major/minor requirements with a minimum gpa of 2.5 and no grade below 2.0. 2. Successful completion of student teaching. 3. Exit evaluation of candidate's portfolio for evidence of attainment of generic competencies and possession of characteristics which facilitate positive teacher-pupil relations.

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Appendix A (cont.)

REQUIREMENTS FOR TEACHER EDUCATION

College/University	Admissions Requirements: College Achievement and Other	Admissions Requirements: Basic Skills	Retention Requirements	Exit Requirements
Gonzaga University	**Admission to Phase I:** 1. "Good Standing" in Univ. 2. Must be making appropriate progress toward a degree with an acceptable major. **Admission to Phase II:** 1. Satisfaction of basic skills requirements (see next column). 2. Satisfactory evaluation of Phase I in-school experience. 3. Acceptable level of performance on all generic standards as evaluated in EDTE 100.	Score of 80 percent on each subtest of college-developed tests in English and mathematics.	**Admission to Phase III:** 1. Completion of major with 3.0 gpa. 2. Cumulative gpa of 2.5. 3. Cumulative gpa of 3.0 in professional ed. courses. 4. Two positive evaluations from major field instructors. 5. Positive evaluation by education faculty. 6. Acceptable philosophy of education and learning theory statement.	1. Completion of bachelor's degree. 2. Successful completion of all professional courses. 3. Successful completion of student teaching. 4. Unanimous recommendation of review board comprising a representative of the college, a school district, and a professional association.
Heritage College	1. Cumulative gpa of 2.3. 2. Completion of General Education requirements with gpa of 2.0. 3. Completion of Ed. 205, Intro. to Ed., which includes: (a)Self-selection criteria (b)education as a career (c)personality inventory (d)30 clock hours in field with successful experience. 4. Recommendation by two teachers.	1. College designed examination in oral communication. 2. College designed examination in writing. 3. California Achievement Test (mathematics).		

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Appendix A (cont.)

REQUIREMENTS FOR TEACHER EDUCATION

College/University	Admissions Requirements: College Achievement and Other	Admissions Requirements: Basic Skills	Retention Requirements	Exit Requirements
Northwest College	1. 2.67 gpa in introductory education and psychology courses. 2. Pass screening interview. 3. 2.67 cum. gpa.	1. 2.67 gpa with no grade below 2.0 in introductory English, speech, and math courses. 2. Pass math, speech, and writing competency tests. 3. Recommendation from communications professor.	1. 2.67 cumulative gpa. 2. 2.67 gpa in prof. ed. sequence. 3. Successful completion of field and course requirements.	1. Completion of all degree requirements. 2. Exit interview with department chairman.
Pacific Lutheran University	1. GPA of 2.5. 2. Two recommendations from business, professional or academic persons. 3. Completion of Minnesota Teacher Attitude Inventory. 4. Autobiography of 500 words.	1. College Board Test of Standard Written English (50 percentile). 2. College Board Test of Written English Expression Placement Test (50 percentile). 3. College Board Math Test (50 percentile).	Positive recommendation from field experience teacher.	1. 2.5 cumulative gpa. 2. No grade in major or minor courses below C-. 3. No grade in ed. courses below C-.
Saint Martin's College	1. Verification of specified competencies and a grade of at least "C" in the following introductory courses; ENG 101 and 102; EDUC 201, 202, and 203; PSYCH 101; SPH 106; and MATH 211. 2. 2.5 cum. gpa.	1. Grade of "C" or better in Math 211 and verification of specified competencies. 2. Grade of "C" or better in SPH 106 and verification from instructor of satisfactory competency. 3. Grade of "C" or better in ENG 101 and 102 and verification of specified, basic competencies. 4. Placement at or above the 50th percentile on the College Board Test of Standard Written English.	1. Maintain an overall 2.5 gpa. 2. Receive a "C" or better in all professional Education courses. 3. Receive a "P" (Pass) in student teaching.	

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Appendix A (cont.)

REQUIREMENTS FOR TEACHER EDUCATION

College/University	Admissions Requirements: College Achievement and Other	Admissions Requirements: Basic Skills	Retention Requirements	Exit Requirements
Seattle Pacific University	2.7 cum. gpa or 3.0 on last 45 qh credits of college work.	1. Composition: McGraw Hill Basic Spelling and Writing Exams (stanine of six or better) OR Descriptive Test of Language Skills of the College Board (20 out of 25 scale score). 2. Computation: Math Test designed by Math Dept. 3. Spelling: McGraw Hill Basic Spelling Exam (stanine of six or better). 4. If scores fall below acceptable levels, satisfactory completion of English, math, and/or spelling lab(s).	1. Satisfactory completion of "Phase 1" block of 3 Ed. courses. 2. Recommendation of Phase 1 faculty team. 3. 2.7 cum. gpa. 4. Recommendation by major advisor. 5. Satisfactory progress in major.	1. Complete degree, major, minor, and education requirements. 2. Earn 2.0 in each education methods course. 3. Earn 3.0 in Phase 2 internships.
Seattle University	1. Overall 2.5 gpa. 2. 2.75 gpa in major teaching field. 3. Interview with faculty member (usually).	California Achievement Test-50th percentile (Math, Reading, Language Arts, and Spelling).	1. Maintain 2.5 cum gpa. 2. Maintain 2.75 gpa in major teaching field. 3. 2.75 gpa in professional education courses. 4. Recommendation of undergraduate teacher education faculty. 5. Recommendation of academic dept. of secondary educa-	

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Appendix A (cont.)

REQUIREMENTS FOR TEACHER EDUCATION

College/University	Admissions Requirements: College Achievement and Other	Admissions Requirements: Basic Skills	Retention Requirements	Exit Requirements
University of Puget Sound	1. Cumulative gpa of 2.25 or better. 2. GPA of 2.5 or better in academic area. 3. Recommended by academic major department.	1. Grade of "C" in written communication core requirement and in oral communication core requirement. 2. Stanford Test of Academic Skills (Reading, English, Math) (50th percentile).	1. Evidence of a strong commitment to teaching by attitude and performance through successful completion of the initial field experience, Education 301, Introduction to Teaching. 2. Cumulative gpa of 2.25. 3. Major gpa of 2.5. 4. GPA of 2.5 in ed. courses with no grade below C-.	1. Cumulative gpa of 2.25. 2. Major gpa of 2.5. 3. GPA of 2.5 in ed. courses with no grade below C-. 4. Successful performance in student teaching. 5. Completion of all degree requirements.
University of Washington	1. GPA at or above University average for all undergraduates (currently 3.0). 2. Recommended by major (academic) dept. 3. Completion of at least 70% of major. 4. Accepted by a school through interviews. 5. Successful prior experience with children.	1. Minimum score of 200 (79th percentile) on the California Achievement Test with no sub-test score below the 50th percentile. 2. Oral: pass interview in local school district.	1. Earn 2.0 or better in each of the professional education courses. 2. Satisfactory performance in the field each of the four quarters (elem) or three quarter (sec). 3. Continued acceptance in the schools.	1. A grade of 2.0 or better in each of the professional education courses. 2. Successful performance in the field experience -- on a 1-5 scale students must score 3 or above on all 11 observation items.
Walla Walla College	1. 2.5 gpa. 2. Pass proficiency exams in Basic Skills (exams designed by Math and English Depts.).	1. Oral: Clearance from Speech and Hearing Dept. 2. Computational: Complete four hours of Math from General Studies Requirement. 3. Composition: Attain minimum gpa in College Writing Class or complete English 129.	1. Completion of Phase 1 Ed. program courses. 2. No grade below C in any required course.	1. 2.5 gpa in major and minor with no grade below C. 2. 2.5 gpa in education courses with no grade below C.

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Appendix A (cont.)

REQUIREMENTS FOR TEACHER EDUCATION

College/University	Admissions Requirements: College Achievement and Other	Admissions Requirements: Basic Skills	Retention Requirements	Exit Requirements
Washington State University	2.5 gpa.	1. 40th percentile on Writing, Reading, and Math sections of the Pre-professional Skills Test (ETS). If lower, students must earn at least a B- in specified courses. 2. Pass oral screening.	1. 2.0 gpa. 2. Completion of half of core ed. courses prior to student teaching.	1. 2.0 gpa 2. Satisfactory student teaching as determined by University supervisor with principal and cooperating teacher.
Western Washington University	1. 2.5 cum. gpa and 2.5 gpa at WWU (2.75 in 1985-87). 2. For elementary students, 2.0 in Education 399, Elementary Seminar.	1. Composition: Test for Standard Written English (50th percentile using H.S. senior norms): and grade "B" or better in English 101, composition/ writing course. 2. Oral: Complete public speaking (Speech 101 or equivalent) with grade of "B" or better.	1. 2.5 gpa at WWU (2.75 in 1985-87). 2. C or better in each major and education course.	1. 2.5 gpa at WWU (2.75 in 1985-87). 2. Satisfactory student teaching as determined by Univ. supervisor in cooperation with cooperating teacher. 3. Computation: Elementary students must complete Math 281 (Theory of Arithmetic) and Math 481 (K-8 Math). All students are required to demonstrate computer competency.
Whitman College	1. 2.25 overall gpa. 2. Approval of Ed. Dept. faculty (interview). 3. Successful completion of introductory ed. courses (Ed. 111 & 112).	1. Oral: Interview process with Ed. Dept. Entry Committee. 2. Written Skills: Missouri College Level English Exam (70th percentile) and brief written essay. 3. Computational: Test, National Council of Teachers of Mathematics (70th percentile).	1. Good academic standing. 2. 2.5 gpa in major. 3. Positive recommendation of major department advisor. 4. C or better in each education course. 5. Approval of entrance committee of program unit.	1. Satisfactory completion of teacher ed. program as determined by program unit. 2. Completion of major. 3. Receipt of bachelor's degree. 4. Demonstrated competence in specific teaching dimensions.

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Appendix A (cont.)

REQUIREMENTS FOR TEACHER EDUCATION

College/University	Admissions Requirements: College Achievement and Other	Admissions Requirements: Basic Skills	Retention Requirements	Exit Requirements
Whitworth College	1. 2.5 gpa (in three areas: cumulative, educ. courses and in major).	Stanford TASK (Test of Academic Skills) by Harcourt, Brace, Janovich. TASK assesses reading, English, and Mathematics (70th percentile).	Evaluation conference in order to be admitted into upper division program. Each student meets with teachers of first two education courses to discuss work to date and self evaluation of competencies. Students are notified in writing of unconditional, conditional and nonadmissions.	Successful completion of student teaching with documented completion of all generic competencies.

-22-

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Appendix B.1a. Analysis of Certification Program Requirements -- Elementary Certification with an Education Major or Specialization [a]

Institution and Program Description	Course Requirements as a Percentage of Total Credits for Graduation: Education-Related Major + Teaching Core[b] Ed.[e]	Non-Ed.[f]	Total[g]	Other Required Major or Minor-Unduplicated[c] Ed.	Non-Ed.	Total	Minimum Unduplicated GUCR's[d] Ed.	Non-Ed.	Total	Totals Ed.	Non-Ed.	Total
Central Washington University Elem. Ed. major, Special Ed. minor	47%	0%	47%	11%	0%	11%	0%	36%	36%	58%	36%	94%
Eastern Washington University Reading major, Early Ch. Ed. minor	52%	3%	56%	9%	0%	9%	2%	18%	20%	64%	21%	85%
University of Washington Bilingual Ed. major, Elem. Ed. minor	52%	22%	74%	—	—	--	0%	18%	18%	52%	40%	92%
Washington State University Reading major, no minor	56%	5%	61%	—	--	--	0%	23%	23%	55%	29%	84%
Western Washington University Elem. Ed. major, Reading Study-in-Depth (minor)	46%	2%	47%	12%	6%	17%	0%	25%	25%	57%	32%	89%
Gonzaga University Special Ed. major	54%	0%	54%	--	--	--	8%	27%	35%	62%	27%	89%
Heritage College Interdisciplinary minors--English, Social Studies, Math	45%	26%	71%	--	--	--	0%	18%	18%	45%	40%	86%
Northwest College Elem. Ed. major, School Disciplines Focus	25%	19%	43%	0%	24%	24%	0%	32%	32%	25%	75%	100%
Pacific Lutheran University Special Ed. major, Language Arts major	52%	3%	55%	5%	14%	19%	3%	28%	31%	60%	45%	105%
St. Martin's College Ed. major, Special Ed. minor	37%	13%	49%	20%	0%	20%	0%	15%	15%	57%	28%	84%
Seattle Pacific University Special Ed. major, Elem. Skills minor	57%	3%	59%	6%	3%	9%	0%	25%	25%	63%	31%	93%
Seattle University Special Ed. major, English & History Teaching Subjects	45%	2%	47%	3%	20%	23%	0%	23%	23%	49%	45%	94%

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Appendix B.1a (cont.) Analysis of Certification Program Requirements -- Elementary Certification with an Education Major or Specialization [a]

Institution and Program Description	Course Requirements as a Percentage of Total Credits for Graduation: Education-Related Major + Teaching Core[b] Ed.[e]	Non-Ed.[f]	Total[g]	Other Required Major or Minor-Unduplicated[c] Ed.	Non-Ed.	Total	Minimum Unduplicated GUCR's[d] Ed.	Non-Ed.	Total	Totals Ed.	Non-Ed.	Total
University of Puget Sound Elem. Ed. major, 6 SC Academic Emphasis	34%	0%	34%	0%	19%	19%	0%	25%	25%	34%	44%	78%
Walla Walla College Elem. Ed. major, Library Science minor	30%	2%	32%	9%	6%	16%	0%	33%	33%	39%	41%	80%
Whitman College None offered	--	--	--	--	--	--	-	--	--	--	--	--
Whitworth College English major academic emphasis, Spec. ed., second academic area	46%	16%	62%	--	--	--	0%	24%	24%	46%	39%	86%
Average Percentage	45%	8%	53%	5%	6%	11%	1%	25%	26%	51%	38%	89%
Lowest Percentage Required	25%	0%	32%	0%	0%	0%	0%	18%	18%	25%	21%	78%
Highest Percentage Required	57%	26%	74%	20%	24%	24%	8%	36%	36%	64%	75%	105%

[a] These programs are the most education-intensive routes to elementary certification available to undergraduates at these institutions. If an elementary education major is offered, it is the program selected for this table. At institutions not offering an elementary education major, the most education-related permitted major was chosen, with a preference for the reading major. One institution does not offer an education-related major. Because of this variation, the selected programs are not necessarily comparable in their content or purpose.

[b] These requirements include those for the indicated major and any other courses required for certification if they are listed separately from those in the major.

[c] Only additional majors or minors that are required for certification are included. Students may elect other minors at most institutions. Courses in the education-related major or teaching core that also satisfy these requirements are excluded.

[d] These courses are the General University Course Requirements -- the basic skills and distribution requirements for graduation. Courses in the major, minor, or teaching core that are allowed to satisfy these requirements are excluded.

[e] These are courses offered by education departments or those offered by other departments which are described as being for teachers or about education. When the requirements permit student choice, education courses if offered and appropriate to the program were selected.

[f] These are courses which do not qualify as education courses as defined above. These percentages reflect the minimum number of non-education courses needed to meet the institutions' requirements.

[g] In some cases, the percentages of education and non-education courses do not equal the total percentage because of rounding errors.

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Appendix B.1b. Analysis of Education Course Requirements — Elementary Certification with an Education Major or Specialization [a]

Institution and Program	Course Requirements as a Percentage of Total Credits for Graduation: Content For Teachers[b]	Foundations and Others[c]	Ed. Psych. and Human Development[d]	Curriculum, Materials and Methods[e]	Field Work Courses[f]	Student Teaching[g]	TOTALS
Central Washington University, Campus-based	2%	15%	6%	24%	2%	9%	58%
Central Washington University, Field-based	2%	12%	6%	24%	5%	9%	58%
Eastern Washington University	4%	6%	7%	32%	6%	9%	64%
University of Washington	3%	3%	6%	19%	11%	10%	52%
Washington State University	0%	3%	8%	33%	3%	8%	55%
Western Washington University, Campus-based	8%	4%	3%	27%	6%	9%	57%
Western Washington University, Field-based	8%	2%	3%	22%	13%	9%	57%
Gonzaga University	5%	6%	7%	28%	2%	13%	62%
Heritage College	7%	9%	5%	15%	2%	8%	45%
Northwest College	1%	2%	5%	9%	3%	6%	25%
Pacific Lutheran University	6%	9%	8%	20%	5%	13%	60%
St. Martin's College	3%	2%	6%	27%	3%	17%	57%
Seattle Pacific University	6%	9%	11%	19%	3%	14%	63%
Seattle University	11%	2%	13%	16%	2%	6%	49%
University of Puget Sound	0%	3%	3%	14%	3%	11%	34%
Walla Walla College	0%	8%	6%	14%	4%	7%	39%
Whitman College	—	—	—	—	—	—	—
Whitworth College	5%	4%	8%	20%	1%	8%	46%
Average Percentage	4%	6%	7%	21%	4%	10%	51%
Lowest Percentage	0%	2%	3%	9%	1%	6%	25%
Highest Percentage	11%	15%	13%	33%	13%	17%	64%

[a] These are the same programs analyzed in the previous table.

[b] Subject matter courses, usually taught outside education departments, that are listed as specifically intended for prospective teachers. Most frequently mathematics and English courses.

[c] General introductory courses; courses in the social, philosophical, and historical foundations of education; and occasionally courses not classifiable in any other category.

[d] Required courses in psychology, whether or not they are taught within education departments.

[e] Courses in the design of instruction and in general and subject-matter-specific methods of teaching.

[f] Courses specifically and primarily focusing upon practical work with students, in schools, or in other agencies serving school-age children. Required courses listed in other categories may include field work.

[g] Courses involving students' full-time participation in schools, usually the culminating requirement of the teacher preparation sequence.

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Appendix B.2a. Analysis of Certification Program Requirements — Elementary Certification with an English Major or Emphasis

Course Requirements as a Percentage of Total Credits for Graduation

Institution and Program Description	English Major			Required Non-Education Minor Unduplicated[a]			Required Education Major or Minor + Teaching Core — Unduplicated[b]			Minimum Unduplicated GUCR's[c]			TOTALS		
	Ed.[d]	Non-Ed.[e]	Total[f]	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total
Central Washington University Language Arts major, Elem. Ed. minor	4%	21%	25%	—	—	—	32%	0%	32%	0%	36%	36%	36%	57%	93%
Eastern Washington University English major, History minor, Prof. Core	8%	14%	22%	0%	10%	10%	36%	3%	39%	0%	16%	16%	43%	43%	86%
University of Washington English major, Elem. Ed. minor	6%	19%	25%	—	—	—	46%	6%	52%	0%	16%	16%	52%	42%	93%
Washington State University Language Arts major, Prof. Ed. minor	15%	10%	25%	—	—	—	36%	0%	36%	0%	23%	23%	51%	33%	84%
Western Washington University English major, Elem. Ed. minor Campus-Based	7%	18%	25%	—	—	—	32%	0%	32%	0%	25%	25%	38%	43%	82%
Western Washington University English major, Elem. Ed. minor Field-Based	7%	18%	25%	—	—	—	36%	0%	36%	0%	25%	25%	42%	43%	86%
Gonzaga University English major	0%	26%	26%	—	—	—	22%	0%	22%	5%	29%	34%	27%	55%	82%
Heritage College English major, History/Pol.Sci. minor	7%	17%	24%	0%	12%	12%	36%	0%	36%	0%	19%	19%	43%	48%	90%
Northwest College Language Arts Focus, Elem. Ed. major	0%	19%	19%	0%	24%	24%	25%	0%	25%	0%	32%	32%	25%	75%	100%
Pacific Lutheran University English major, Social Studies minor	3%	16%	19%	0%	12%	12%	30%	0%	30%	3%	28%	31%	36%	53%	89%
St. Martin's College English major, Education major	0%	29%	29%	—	—	—	37%	8%	44%	0%	13%	13%	37%	49%	86%
Seattle Pacific University English major, Elem. Skills minor	1%	32%	33%	—	—	—	36%	6%	42%	0%	19%	19%	38%	57%	95%
Seattle University B. Ed. Elem, English & History Teaching Subjects	5%	13%	18%	0%	13%	13%	39%	3%	42%	0%	21%	21%	45%	44%	89%

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Appendix B.2a (cont.) Analysis of Certification Program Requirements — Elementary Certification with an English Major or Emphasis

Course Requirements as a Percentage of total Credits for Graduation

Institution and Program Description	English Major			Required Non-Education Minor Unduplicated[a]			Required Education Major or Minor + Teaching Core— Unduplicated[b]			Minimum Unduplicated GDCR's[c]			TOTALS		
	Ed.[d]	Non-Ed.[e]	Total[f]	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total
University of Puget Sound English major, Elem. Ed. major	0%	31%	31%	—	—	—	34%	0%	34%	0%	23%	23%	34%	56%	91%
Walla Walla College English major, Elem. Ed. major	2%	28%	29%	—	—	—	30%	2%	32%	0%	26%	26%	31%	56%	87%
Whitman College English major	0%	27%	27%	—	—	—	32%	6%	38%	2%	23%	26%	35%	56%	91%
Whitworth College English major	11%	26%	37%	—	—	—	25%	0%	25%	0%	25%	25%	36%	50%	86%
Average Percentage	4%	22%	26%	0%	4%	4%	33%	2%	35%	1%	23%	24%	38%	51%	89%
Lowest Percentage	0%	10%	18%	0%	0%	0%	22%	0%	22%	0%	13%	13%	25%	31%	82%
Highest Percentage	15%	32%	37%	0%	24%	24%	46%	9%	52%	5%	36%	36%	52%	78%	100%

[a]Only additional minors that are required for certification are included. Students may elect other minors at most institutions. Courses in the English major that also satisfy these requirements are excluded.

[b]These requirements include those for the indicated education major or minor and any other courses required for certification if they are listed separately from those in the education major or minor. Courses in the English major or non-education minor that also satisfy these requirements are excluded.

[c]These courses are the General University Course Requirements — the basic skills and distribution requirements for graduation. Courses in the major, minor, or teaching core that are allowed to satisfy these requirements are excluded.

[d]These are courses offered by education departments or those offered by other departments which are described as being for teachers or about education. When the requirements permit student choice, education courses if offered and appropriate to the program were selected.

[e]These are courses which do not qualify as education courses as defined above. These percentages reflect the minimum number of non-education courses needed to meet the institutions' requirements.

[f]In some cases, the percentages of education and non-education courses do not equal the total percentage because of rounding errors.

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Appendix B.2b. Analysis of Education Course Requirements — Elementary Certification with an English Major or Emphasis [a]

Institution and Program	Course Requirements as a Percentage of Total Credits for Graduation: Content for Teachers[b]	Foundations and Others[c]	Ed. Psych. and Human Development[d]	Curriculum, Materials and Methods[e]	Field Work Courses[f]	Student Teaching[g]	TOTALS
Central Washington University, Campus-based	2%	4%	4%	15%	2%	9%	36%
Central Washington University, Field-based	2%	1%	4%	15%	5%	9%	36%
Eastern Washington University	7%	3%	3%	18%	3%	9%	43%
University of Washington	6%	2%	7%	16%	11%	10%	52%
Washington State University	0%	0%	8%	33%	1%	8%	51%
Western Washington University, Campus-based	7%	4%	4%	14%	0%	9%	38%
Western Washington University, Field-based	7%	2%	3%	12%	9%	9%	42%
Gonzaga University	5%	2%	2%	9%	2%	7%	27%
Heritage College	5%	7%	6%	15%	2%	8%	43%
Northwest College	1%	2%	5%	9%	3%	6%	25%
Pacific Lutheran University	6%	5%	0%	14%	3%	8%	36%
St. Martin's College	3%	2%	6%	17%	2%	10%	37%
Seattle Pacific University	6%	4%	2%	13%	3%	9%	38%
Seattle University	8%	4%	5%	13%	2%	6%	45%
University of Puget Sound	0%	3%	3%	14%	3%	11%	34%
Walla Walla College	2%	5%	6%	10%	2%	7%	31%
Whitman College	0%	7%	9%	10%	1%	8%	35%
Whitworth College	5%	4%	5%	12%	1%	8%	36%
Average Percentage	4%	3%	5%	14%	3%	8%	38%
Lowest Percentage	0%	0%	0%	9%	0%	6%	25%
Highest Percentage	8%	7%	9%	33%	11%	11%	52%

[a] These are the same programs analyzed in the previous table.
[b] Subject matter courses, usually taught outside education departments, that are listed as specifically intended for prospective teachers. Most frequently mathematics and English courses.
[c] General introductory courses; courses in the social, philosophical, and historical foundations of education; and occasionally courses not classifiable in any other category.
[d] Required courses in psychology, whether or not they are taught within education departments.
[e] Courses in the design of instruction and in general and subject-matter-specific methods of teaching.
[f] Courses specifically and primarily focusing upon practical work with students, in schools, or in other agencies serving school-age children. Required courses listed in other categories may include field work.
[g] Courses involving students' full-time participation in schools, usually the culminating requirement of the teacher preparation sequence.

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Appendix B.3a. Analysis of Certification Program Requirements — Secondary Certification with a Biology major

Institution and Program Description	Course Requirements as a Percentage of Total Credits for Graduation: Biology Major Ed.[d]	Biology Major Non-Ed.[e]	Biology Major Total[f]	Required Minor Unduplicated[a] Ed.	Required Minor Unduplicated[a] Non-Ed.	Required Minor Unduplicated[a] Total	Teaching Core Unduplicated[b] Ed.	Teaching Core Unduplicated[b] Non-Ed.	Teaching Core Unduplicated[b] Total	Minimum Unduplicated GUCR's[c] Ed.	Minimum Unduplicated GUCR's[c] Non-Ed.	Minimum Unduplicated GUCR's[c] Total	TOTALS Ed.	TOTALS Non-Ed.	TOTALS Total
Central Washington University Biology major, Chemistry minor	2%	23%	25%	0%	11%	11%	22%	0%	22%	0%	33%	33%	24%	67%	91%
Eastern Washington University Biology major with Supporting Courses, no minor	2%	38%	39%	—	—	—	24%	3%	28%	2%	16%	18%	28%	57%	85%
University of Washington Biology major, Chemistry minor	0%	26%	26%	0%	23%	23%	29%	3%	32%	0%	19%	19%	29%	71%	100%
Washington State University Biology major, Math/Science minor	3%	26%	28%	0%	20%	20%	22%	0%	22%	2%	23%	24%	26%	68%	94%
Western Washington University Biology major, no minor Campus-Based	5%	44%	49%	—	—	—	22%	0%	22%	0%	27%	27%	27%	71%	98%
Western Washington University Biology major, no minor Field-Based	5%	44%	49%	—	—	—	25%	0%	25%	0%	27%	27%	30%	71%	101%
Gonzaga University Biology major, no minor	0%	23%	23%	—	—	—	22%	0%	22%	0%	33%	33%	22%	56%	78%
Heritage College, none offered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Northwest College, none offered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pacific Lutheran University Biology major, no minor	0%	34%	34%	—	—	—	23%	6%	30%	0%	31%	31%	23%	72%	95%
St. Martin's College Biology major, no minor	0%	53%	53%	—	—	—	28%	13%	41%	0%	12%	12%	28%	78%	106%
Seattle Pacific University Biology major, no minor	2%	36%	38%	—	—	—	26%	3%	29%	0%	28%	28%	28%	67%	95%
Seattle University Biology major, no minor	0%	24%	24%	—	—	—	24%	0%	24%	0%	22%	22%	24%	46%	70%
University of Puget Sound Biology major, English minor	0%	38%	38%	0%	16%	16%	25%	0%	25%	0%	16%	16%	25%	69%	94%
Walla Walla College Biology major, no minor	0%	55%	55%	—	—	—	22%	2%	24%	0%	22%	22%	22%	79%	101%

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Appendix B.3a (cont.) Analysis of Certification Program Requirements — Secondary Certification with a Biology Major

Institution and Program Description	Course Requirements as a Percentage of Total Credits for Graduation														
	Biology Major			Required Minor Unduplicated[a]			Teaching Core Unduplicated[b]			Minimum GUCR's[c]			TOTALS		
	Ed.[d]	Non-Ed.[e]	Total[f]	Ed.	Non-Ed.	Totals	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total
Whitman College Biology major, no minor	0%	41%	41%	--	--	--	29%	2%	31%	2%	17%	19%	31%	60%	92%
Whitworth College Biology major, no minor	3%	34%	37%	--	--	--	25%	0%	25%	0%	21%	21%	28%	55%	83%
Average Percentage	1%	35%	36%	0%	5%	5%	25%	2%	27%	0%	23%	23%	26%	65%	92%
Lowest Percentage	0%	23%	23%	0%	0%	0%	22%	0%	22%	0%	12%	12%	22%	46%	70%
Highest Percentage	5%	55%	55%	0%	23%	23%	29%	13%	41%	2%	33%	33%	31%	79%	106%

[a]Only additional minors that are required for certification are included. Students may elect other minors at most institutions. Courses in the biology major that also satisfy these requirements are excluded.

[b]These are courses outside the major or minor that are required for certification. Courses in the major or minor that also satisfy these requirements are excluded.

[c]These courses are the General University Course Requirements -- the basic skills and distribution requirements for graduation. Courses in the major, minor, or teaching core that also satisfy these requirements are excluded.

[d]These are courses offered by education departments or those offered by other departments which are described as being for teachers or about education. When the requirements permit student choice, education courses if offered and appropriate to the program were selected.

[e]These are courses which do not qualify as education courses as defined above. These percentages reflect the minimum number of non-education courses needed to meet the institutions' requirements.

[f]In some cases, the percentages of education and non-education courses do not equal the total percentage because of rounding errors.

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Appendix B.3b. Analysis of Education Course Requirements -- Secondary Certification with a Biology Major [a]

Institution and Program	Course Requirements as a Percentage of Total Credits for Graduation: Content for Teachers[b]	Foundations and Others[c]	Ed. Psych. and Human Development[d]	Curriculum, Materials and Methods[e]	Field Work Courses[f]	Student Teaching[g]	TOTALS
Central Washington University, Campus-based	0%	4%	4%	5%	2%	9%	24%
Central Washington University, Field-based	0%	1%	4%	5%	5%	9%	24%
Eastern Washington University	0%	3%	3%	9%	2%	9%	28%
University of Washington	0%	2%	4%	6%	7%	10%	29%
Washington State University	0%	0%	3%	13%	1%	8%	26%
Western Washington University, Campus-based	0%	4%	6%	8%	0%	9%	27%
Western Washington University, Field-based	0%	2%	4%	6%	9%	9%	30%
Gonzaga University	0%	2%	5%	7%	2%	7%	22%
Heritage College	—	—	—	—	—	--	—
Northwest College	—	—	—	--	--	--	--
Pacific Lutheran University	0%	3%	3%	6%	3%	8%	23%
St. Martin's College	3%	2%	6%	7%	2%	10%	28%
Seattle Pacific University	0%	2%	2%	4%	2%	19%	28%
Seattle University	0%	4%	5%	6%	2%	6%	24%
University of Puget Sound	0%	3%	3%	5%	3%	11%	25%
Walla Walla College	0%	3%	6%	4%	2%	6%	22%
Whitman College	0%	7%	9%	6%	1%	8%	31%
Whitworth College	0%	4%	7%	8%	1%	8%	28%
Average Percentage	0%	3%	5%	7%	3%	9%	26%
Lowest Percentage	0%	0%	3%	4%	0%	6%	22%
Highest Percentage	3%	7%	9%	13%	9%	19%	31%

[a] These are the same programs analyzed in the previous table.
[b] Subject matter courses, usually taught outside education departments, that are listed as specifically intended for prospective teachers. Most frequently mathematics and English courses.
[c] General introductory courses; courses in the social, philosophical, and historical foundations of education; and occasionally courses not classifiable in any other category.
[d] Required courses in psychology, whether or not they are taught within education departments.
[e] Courses in the design of instruction and in general and subject-matter-specific methods of teaching.
[f] Courses specifically and primarily focusing upon practical work with students, in schools, or in other agencies serving school-age children. Required courses listed in other categories may include field work.
[g] Courses involving students' full-time participation in schools, usually the culminating requirement of the teacher preparation sequence.

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Appendix B.4a. Analysis of Certification Program Requirements — Secondary Certification with an English Major

Course Requirements as a Percentage of Total Credits for Graduation

Institution and Program Description	English Major			Required Minor Unduplicated[a]			Teaching Core Unduplicated[b]			Minimum Unduplicated GUCR's[c]			TOTALS		
	Ed.[d]	Non-Ed.[e]	Total[f]	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total
Central Washington University English major, History minor	3%	22%	25%	1%	10%	11%	22%	0%	22%	0%	33%	33%	27%	64%	91%
Eastern Washington University English major, History minor	9%	17%	27%	0%	10%	10%	24%	3%	28%	2%	16%	18%	36%	46%	82%
University of Washington English major, no minor	8%	22%	31%	—	—	—	28%	3%	31%	0%	30%	30%	36%	56%	92%
Washington State University English major, History minor	3%	29%	32%	3%	15%	18%	22%	0%	22%	2%	20%	22%	28%	64%	93%
Western Washington University English major, no minor Campus-Based	7%	29%	36%	—	—	—	22%	0%	22%	0%	24%	24%	29%	53%	85%
Western Washington University English major, no minor Field-Based	7%	29%	36%	—	—	—	25%	0%	25%	0%	24%	24%	32%	53%	84%
Gonzaga University English major, no minor	5%	21%	26%	—	—	—	22%	0%	22%	0%	34%	34%	27%	54%	81%
Heritage College English major, History minor	5%	21%	25%	0%	13%	13%	36%	0%	36%	0%	19%	19%	40%	52%	93%
Northwest College	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pacific Lutheran University English major, no minor	0%	38%	38%	—	—	—	23%	6%	30%	0%	34%	34%	23%	78%	101%
St. Martin's College English major, History minor	0%	29%	29%	0%	15%	15%	28%	8%	36%	0%	13%	13%	28%	64%	93%
Seattle Pacific University English major, no minor	2%	32%	34%	—	—	—	25%	3%	28%	0%	27%	27%	27%	62%	89%
Seattle University English major, no minor	2%	32%	34%	—	—	—	24%	0%	24%	0%	16%	16%	26%	48%	74%
University of Puget Sound English major, no minor	0%	31%	31%	—	—	—	25%	0%	25%	0%	25%	25%	25%	56%	81%
Walla Walla College English major, History minor	3%	28%	31%	0%	10%	10%	22%	2%	24%	0%	31%	31%	25%	71%	96%

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Appendix B.4a (cont.) Analysis of Certification Program Requirements — Secondary Certification with an English Major

Institution and Program Description	Course Requirements as a Percentage of Total Credits for Graduation: English Major Ed.[d]	Non-Ed.[e]	Total[f]	Required Minor Unduplicated[a] Ed.	Non-Ed.	Totals	Teaching Core Unduplicated[b] Ed.	Non-Ed.	Total	Minimum GUCR's[c] Ed.	Non-Ed.	Total	TOTALS Ed.	Non-Ed.	Total
Whitman College English major, no minor	0%	27%	27%	—	—	—	29%	2%	31%	2%	22%	24%	31%	52%	83%
Whitworth College English major, no minor	8%	29%	37%	—	—	—	25%	0%	25%	0%	26%	26%	33%	55%	88%
Average Percentage	4%	27%	31%	0%	5%	5%	25%	2%	27%	0%	25%	25%	30%	58%	88%
Lowest Percentage	0%	17%	25%	0%	0%	0%	22%	0%	22%	0%	13%	13%	23%	46%	74%
Highest Percentage	9%	38%	38%	3%	15%	18%	36%	8%	36%	2%	34%	34%	40%	78%	101%

[a]Only additional minors that are required for certification are included. Students may elect other minors at most institutions. Courses in the English major that also satisfy these requirements are excluded.
[b]These are courses outside the major or minor that are required for certification. Courses in the major or minor that also satisfy these requirements are excluded.
[c]These courses are the General University Course Requirements — the basic skills and distribution requirements for graduation. Courses in the major, minor, or teaching core that also satisfy these requirements are excluded.
[d]These are courses offered by education departments or those offered by other departments which are described as being for teachers or about education. When the requirements permit student choice, education courses if offered and appropriate to the program were selected.
[e]These are courses which do not qualify as education courses as defined above. These percentages reflect the minimum number of non-education courses needed to meet the institutions' requirements.
[f]In some cases, the percentages of education and non-education courses do no equal the total percentage because of rounding errors.

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Appendix B.4b. Analysis of Education Course Requirements -- Secondary Certification with an English Major [a]

Institution and Program	Course Requirements as a Percentage of Total Credits for Graduation: Content for Teachers[b]	Foundations and Others[c]	Ed. Psych. and Human Development[d]	Curriculum, Materials and Methods[e]	Field Work Courses[f]	Student Teaching[g]	TOTALS
Central Washington University, Campus-based	0%	4%	4%	6%	4%	9%	27%
Central Washington University, Field-based	0%	1%	4%	6%	7%	9%	27%
Eastern Washington University	2%	3%	5%	15%	2%	9%	36%
University of Washington	3%	2%	7%	8%	7%	10%	36%
Washington State University	0%	0%	3%	16%	1%	8%	28%
Western Washington University, Campus-based	0%	4%	6%	10%	0%	9%	29%
Western Washington University, Field-based	0%	2%	4%	8%	9%	9%	32%
Gonzaga University	0%	2%	5%	12%	2%	7%	27%
Heritage College	2%	9%	5%	15%	2%	10%	40%
Northwest College	--	--	--	--	--	--	--
Pacific Lutheran University	0%	3%	3%	6%	3%	8%	23%
St. Martin's College	3%	2%	6%	7%	2%	10%	28%
Seattle Pacific University	0%	2%	2%	3%	2%	19%	27%
Seattle University	0%	4%	5%	7%	2%	6%	25%
University of Puget Sound	0%	3%	3%	5%	3%	11%	25%
Walla Walla College	3%	3%	6%	4%	2%	7%	26%
Whitman College	0%	7%	9%	6%	1%	8%	31%
Whitworth College	3%	4%	7%	11%	1%	8%	33%
Average Percentage	1%	3%	5%	9%	3%	9%	30%
Lowest Percentage	0%	0%	2%	3%	0%	6%	23%
Highest Percentage	3%	9%	9%	16%	9%	19%	40%

[a] These are the same programs analyzed in the previous table.
[b] Subject matter courses, usually taught outside education departments, that are listed as specifically intended for prospective teachers. Most frequently mathematics and English courses.
[c] General introductory courses; courses in the social, philosophical, and historical foundations of education; and occasionally courses not classifiable in any other category.
[d] Required courses in psychology, whether or not they are taught within education departments.
[e] Courses in the design of instruction and in general and subject-matter-specific methods of teaching.
[f] Courses specifically and primarily focusing upon practical work with students, in schools, or in other agencies serving school-age children. Required courses listed in other categories may include field work.
[g] Courses involving students' full-time participation in schools, usually the culminating requirement of the teacher preparation sequence.

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Appendix B.5a. Analysis of Certification Program Requirements — Secondary Certification with a History Major

Institution and Program Description	Course Requirements as a Percentage of Total Credits for Graduation: History Major Ed.[d]	History Major Non-Ed.[e]	History Major Total[f]	Required Minor Unduplicated[a] Ed.	Required Minor Unduplicated[a] Non-Ed.	Required Minor Unduplicated[a] Total	Teaching Core Unduplicated[b] Ed.	Teaching Core Unduplicated[b] Non-Ed.	Teaching Core Unduplicated[b] Total	Minimum Unduplicated GUCR's[c] Ed.	Minimum Unduplicated GUCR's[c] Non-Ed.	Minimum Unduplicated GUCR's[c] Total	TOTALS Ed.	TOTALS Non-Ed.	TOTALS Total
Central Washington University Broad Area History major, no minor	1%	35%	36%	—	—	—	22%	0%	22%	0%	36%	36%	23%	71%	94%
Eastern Washington University History major, Alternative 1, no minor	0%	34%	34%	—	—	—	24%	3%	28%	0%	13%	13%	24%	51%	75%
University of Washington History major, no minor	2%	31%	32%	—	—	—	26%	3%	29%	0%	30%	30%	28%	66%	93%
Washington State University History major, Political Science and English minors	3%	25%	28%	3%	28%	30%	22%	0%	22%	2%	15%	17%	28%	68%	96%
Western Washington University History major, Social Studies minor, Campus-Based	2%	32%	33%	0%	13%	13%	22%	0%	22%	0%	14%	14%	24%	59%	83%
Western Washington University History major, Social Studies minor, Field-Based	2%	32%	33%	0%	13%	13%	25%	0%	25%	0%	14%	14%	27%	59%	86%
Gonzaga University History major, no minor	0%	23%	23%	—	—	—	22%	0%	22%	0%	36%	36%	22%	59%	81%
Heritage College	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Northwest College	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pacific Lutheran University History major, no minor	0%	34%	34%	—	—	—	23%	3%	27%	0%	31%	31%	23%	69%	92%
St. Martin's College History major, no minor	0%	37%	37%	—	—	—	28%	13%	41%	0%	15%	15%	28%	64%	93%
Seattle Pacific University History major, no minor	3%	28%	31%	—	—	—	26%	3%	29%	0%	31%	31%	29%	62%	91%
Seattle University History major, no minor	0%	29%	29%	—	—	—	24%	0%	24%	0%	26%	26%	24%	55%	79%
University of Puget Sound History major, no minor	0%	34%	34%	—	—	—	25%	0%	25%	0%	31%	31%	25%	66%	91%
Walla Walla College History major, English minor	0%	27%	27%	2%	14%	16%	22%	2%	24%	0%	28%	28%	23%	71%	94%

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Appendix B.5a (cont.) Analysis of Certification Program Requirements -- Secondary Certification with a History Major

Institution and Program Description	Course Requirements as a Percentage of Total Credits for Graduation														
	History Major			Required Minor Unduplicated[a]			Teaching Core Unduplicated[b]			Minimum GUCR's[c]			TOTALS		
	Ed.[d]	Non-Ed.[e]	Total[f]	Ed.	Non-Ed.	Totals	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total
Whitman College History major, no minor	0%	29%	29%	--	--	--	29%	2%	31%	2%	22%	24%	31%	53%	85%
Whitworth College History major, no minor	3%	34%	37%	--	--	--	25%	0%	25%	0%	24%	24%	28%	58%	86%
Average Percentage	1%	31%	32%	0%	4%	4%	24%	2%	27%	0%	25%	25%	26%	62%	88%
Lowest Percentage	0%	23%	23%	0%	0%	0%	22%	0%	22%	0%	13%	13%	22%	51%	75%
Highest Percentage	3%	37%	37%	3%	28%	30%	28%	13%	41%	2%	36%	36%	31%	71%	96%

[a]Only additional minors that are required for certification are included. Students may elect other minors at most institutions. Courses in the history major that also satisfy these requirements are excluded.

[b]These are courses outside the major or minor that are required for certification. Courses in the major or minor that also satisfy these requirements are excluded.

[c]These courses are the General University Course Requirements -- the basic skills and distribution requirements for graduation. Courses in the major, minor, or teaching core that also satisfy these requirements are excluded.

[d]These are courses offered by education departments or those offered by other departments which are described as being for teachers or about education. When the requirements permit student choice, education courses if offered and appropriate to the program were selected.

[e]These are courses which do not qualify as education courses as defined above. These percentages reflect the minimum number of non-education courses needed to meet the institutions' requirements.

[f]In some cases, the percentages of education and non-education courses do not equal the total percentage because of rounding errors.

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Appendix B.5b. Analysis of Education Course Requirements — Secondary Certification with a History Major [a]

Institution and Program	Course Requirements as a Percentage of Total Credits for Graduation						
	Content for Teachers[b]	Foundations and Others[c]	Ed. Psych. and Human Development[d]	Curriculum, Materials and Methods[e]	Field Work Courses[f]	Student Teaching[g]	TOTALS
Central Washington University, Campus-based	0%	4%	4%	4%	2%	9%	23%
Central Washington University, Field-based	0%	1%	4%	4%	5%	9%	23%
Eastern Washington University	0%	3%	3%	8%	2%	9%	24%
University of Washington	0%	2%	4%	5%	7%	10%	28%
Washington State University	0%	0%	3%	16%	1%	8%	28%
Western Washington University, Campus-based	0%	4%	6%	5%	0%	9%	24%
Western Washington University, Field-based	0%	2%	4%	3%	9%	9%	27%
Gonzaga University	0%	2%	5%	7%	2%	7%	22%
Heritage College	—	—	—	—	—	—	—
Northwest College	—	—	—	—	—	—	—
Pacific Lutheran University	0%	3%	3%	6%	6%	8%	23%
St. Martin's College	3%	2%	6%	7%	2%	10%	28%
Seattle Pacific University	0%	2%	2%	5%	2%	19%	29%
Seattle University	0%	4%	6%	5%	2%	6%	24%
University of Puget Sound	0%	3%	3%	5%	3%	11%	25%
Walla Walla College	2%	3%	6%	4%	2%	7%	23%
Whitman College	0%	7%	9%	6%	1%	8%	31%
Whitworth College	0%	4%	7%	8%	1%	8%	28%
Average Percentage	0%	3%	5%	6%	3%	9%	26%
Lowest Percentage	0%	0%	2%	3%	0%	6%	22%
Highest Percentage	3%	7%	9%	16%	9%	19%	31%

[a] These are the same programs analyzed in the previous table.
[b] Subject matter courses, usually taught outside education departments, that are listed as specifically intended for prospective teachers. Most frequently mathematics and English courses.
[c] General introductory courses; courses in the social, philosophical, and historical foundations of education; and occasionally courses not classifiable in any other category.
[d] Required courses in psychology, whether or not they are taught within education departments.
[e] Courses in the design of instruction and in general and subject-matter-specific methods of teaching.
[f] Courses specifically and primarily focusing upon practical work with students, in schools, or in other agencies serving school-age children. Required courses listed in other categories may include field work.
[g] Courses involving students' full-time participation in schools, usually the culminating requirement of the teacher preparation sequence.

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Appendix B.6a. Analysis of Certification Program Requirements — Secondary Certification with a Mathematics Major

Course Requirements as a Percentage of Total Credits for Graduation

Institution and Program Description	Mathematics Major			Required Minor Unduplicated[a]			Teaching Core Unduplicated[b]			Minimum Unduplicated GUCR's[c]			TOTALS		
	Ed.[d]	Non-Ed.[e]	Total[f]	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total
Central Washington University Math major, Physics minor	6%	19%	25%	0%	11%	11%	22%	0%	22%	0%	33%	33%	28%	63%	91%
Eastern Washington University Math major, no minor	4%	30%	34%	--	--	--	24%	3%	28%	2%	20%	22%	31%	53%	84%
University of Washington Math major, Physics minor	7%	21%	28%	6%	12%	17%	29%	3%	33%	0%	19%	19%	42%	55%	97%
Washington State University Math major, Physics minor	3%	24%	27%	3%	15%	18%	22%	0%	22%	2%	26%	28%	28%	65%	93%
Western Washington University Math major, no minor Campus-Based	2%	31%	33%	--	--	--	22%	0%	22%	0%	31%	31%	24%	62%	86%
Western Washington University Math major, no minor Field-Based	2%	31%	33%	--	--	--	25%	0%	25%	0%	31%	31%	27%	62%	89%
Gonzaga University Math major, no minor	0%	24%	24%	--	--	--	22%	0%	22%	0%	36%	36%	22%	60%	82%
Heritage College	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Northwest College	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pacific Lutheran University Math major, no minor	0%	34%	34%	--	--	--	23%	6%	30%	0%	31%	31%	23%	72%	95%
St. Martin's College Math major, no minor	0%	45%	45%	--	--	--	28%	13%	41%	0%	15%	15%	28%	73%	101%
Seattle Pacific University Math major, no minor	2%	28%	30%	--	--	--	26%	3%	29%	0%	31%	31%	28%	62%	90%
Seattle University Math major, no minor	0%	24%	24%	--	--	--	24%	0%	24%	0%	22%	22%	24%	46%	70%
University of Puget Sound Math major, no minor	0%	33%	33%	--	--	--	25%	0%	25%	0%	31%	31%	25%	64%	89%
Walla Walla College B.A. Math, Physics minor	0%	25%	25%	0%	14%	14%	22%	2%	24%	0%	28%	28%	22%	69%	91%

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Appendix B.6a (cont.) Analysis of Certification Program Requirements — Secondary Certification with a Mathematics Major

Institution and Program Description	Course Requirements as a Percentage of Total Credits for Graduation														
	Mathematics Major			Required Minor Unduplicated[a]			Teaching Core Unduplicated[b]			Minimum GUCR's[c]			TOTALS		
	Ed.[d]	Non-Ed.[e]	Total[f]	Ed.	Non-Ed.	Totals	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total
Whitman College Math major, no minor	0%	27%	27%	--	--	--	29%	2%	31%	2%	22%	24%	31%	52%	83%
Whitworth College Math major, Physics Related Area	3%	24%	26%	0%	11%	11%	25%	0%	25%	0%	21%	21%	28%	55%	83%
Average Percentage	2%	28%	30%	1%	5%	5%	25%	2%	27%	0%	26%	27%	28%	61%	88%
Lowest Percentage	0%	19%	24%	0%	0%	0%	22%	0%	22%	0%	15%	15%	22%	46%	70%
Highest Percentage	7%	45%	45%	6%	15%	18%	29%	13%	41%	2%	36%	36%	42%	73%	95%

[a]Only additional minors that are required for certification are included. Students may elect other minors at most institutions. Courses in the mathematics major that also satisfy these requirements are excluded.

[b]These are courses outside the major or minor that are required for certification. Courses in the major or minor that also satisfy these requirements are excluded.

[c]These courses are the General University Course Requirements -- the basic skills and distribution requirements for graduation. Courses in the major, minor, or teaching core that also satisfy these requirements are excluded.

[d]These are courses offered by education departments or those offered by other departments which are described as being for teachers or about education. When the requirements permit student choice, education courses if offered and appropriate to the program were selected.

[e]These are courses which do not qualify as education courses as defined above. These percentages reflect the minimum number of non-education courses needed to meet the institutions' requirements.

[f]In some cases, the percentages of education and non-education courses do not equal the total percentage because of rounding errors.

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Appendix B.6b. Analysis of Education Course Requirements -- Secondary Certification with Mathematics Major [a]

Institution and Program	Course Requirements as a Percentage of Total Credits for Graduation						
	Content for Teachers[b]	Foundations and Others[c]	Ed. Psych. and Human Development[d]	Curriculum, Materials and Methods[e]	Field Work Courses[f]	Student Teaching[g]	TOTALS
Central Washington University, Campus-based	2%	4%	4%	4%	4%	9%	28%
Central Washington University, Field-based	2%	1%	4%	4%	7%	9%	28%
Eastern Washington University	0%	3%	5%	12%	2%	9%	31%
University of Washington	12%	2%	4%	7%	7%	10%	42%
Washington State University	0%	0%	3%	16%	1%	8%	28%
Western Washington University, Campus-based	0%	4%	6%	6%	0%	9%	24%
Western Washington University, Field-based	0%	2%	4%	3%	9%	9%	27%
Gonzaga University	0%	2%	5%	7%	2%	7%	22%
Heritage College	--	--	--	--	--	--	--
Northwest College	--	--	--	--	--	--	--
Pacific Lutheran University	0%	3%	3%	6%	3%	8%	23%
St. Martin's College	3%	2%	6%	7%	2%	10%	28%
Seattle Pacific University	0%	2%	2%	3%	2%	19%	28%
Seattle University	0%	4%	5%	6%	2%	6%	24%
University of Puget Sound	0%	3%	3%	5%	3%	11%	25%
Walla Walla College	0%	3%	6%	4%	2%	7%	22%
Whitman College	0%	7%	9%	6%	1%	8%	31%
Whitworth College	0%	4%	7%	8%	1%	8%	28%
Average Percentage	1%	3%	5%	7%	3%	9%	28%
Lowest Percentage	0%	0%	2%	3%	1%	6%	22%
Highest Percentage	12%	7%	9%	16%	9%	19%	42%

[a] These are the same programs analyzed in the previous table.
[b] Subject matter courses, usually taught outside education departments, that are listed as specifically intended for prospective teachers. Most frequently mathematics and English courses.
[c] General introductory courses; courses in the social, philosophical, and historical foundations of education; and occasionally courses not classifiable in any other category.
[d] Required courses in psychology, whether or not they are taught within education departments.
[e] Courses in the design of instruction and in general and subject-matter-specific methods of teaching.
[f] Courses specifically and primarily focusing upon practical work with students, in schools, or in other agencies serving school-age children. Required courses listed in other categories may include field work.
[g] Courses involving students' full-time participation in schools, usually the culminating requirement of the teacher preparation sequence.

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Appendix B.7a. Analysis of Certification Program Requirements — Secondary Certification with a Social Studies Major

Course Requirements as a Percentage of Total Credits for Graduation

Institution and Program Description	Social Studies Major			Required Minor Unduplicated[a]			Teaching Core Unduplicated[b]			Minimum Unduplicated GUCR's[c]			TOTALS		
	Ed.[d]	Non-Ed.[e]	Total[f]	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total	Ed.	Non-Ed.	Total
Central Washington University Social Science major, Broad area, No minor	3%	33%	36%	--	--	--	22%	0%	22%	0%	36%	36%	25%	69%	94%
Eastern Washington University Social Studies major, Alternative 2, no minor	2%	44%	47%	--	--	--	24%	3%	28%	0%	13%	13%	27%	61%	88%
University of Washington, none offered	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington State University Social Studies major, no minor	3%	32%	34%	3%	13%	15%	22%	0%	22%	2%	25%	27%	28%	70%	98%
Western Washington University Political Science major, Social Studies minor, Campus-Based	0%	33%	33%	0%	13%	13%	24%	0%	24%	0%	14%	14%	24%	61%	85%
Western Washington University Political Science major, Social Studies minor, Field-Based	0%	33%	33%	0%	13%	13%	27%	0%	27%	0%	14%	14%	27%	61%	88%
Gonzaga University, none offered	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heritage College History/Political Science major, English minor	0%	25%	25%	5%	8%	13%	36%	0%	36%	0%	21%	21%	41%	55%	95%
Northwest College, none offered	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pacific Lutheran University Social Science major, no minor	0%	34%	34%	--	--	--	23%	3%	27%	0%	31%	31%	23%	69%	92%
St. Martin's College Social Studies major, no minor	0%	41%	41%	--	--	--	28%	13%	41%	0%	15%	15%	28%	68%	97%
Seattle Pacific University Social Studies major, no minor	2%	39%	41%	--	--	--	26%	3%	29%	0%	28%	28%	28%	71%	98%
Seattle University Social Studies major, Comprehensive Endorsement	0%	37%	37%	--	--	--	24%	0%	24%	0%	19%	19%	24%	48%	80%
University of Puget Sound, none offered	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Walla Walla College, none offered	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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Appendix B.7a (cont.) Analysis of Certification Program Requirements — Secondary Certification with a Social Studies Major

Institution and Program Description	Course Requirements as a Percentage of Total Credits for Graduation: Social Studies Major Ed.[d]	Social Studies Major Non-Ed.[e]	Social Studies Major Total[f]	Required Minor Unduplicated[a] Ed.	Required Minor Unduplicated[a] Non-Ed.	Required Minor Unduplicated[a] Totals	Teaching Core Unduplicated[b] Ed.	Teaching Core Unduplicated[b] Non-Ed.	Teaching Core Unduplicated[b] Total	Minimum GUCR's[c] Ed.	Minimum GUCR's[c] Non-Ed.	Minimum GUCR's[c] Total	TOTALS Ed.	TOTALS Non-Ed.	TOTALS Total
Whitman College History major, Recommended for Social Studies	0%	69%	69%	--	--	--	26%	0%	26%	6%	16%	22%	31%	85%	117%
Whitworth College, none offered	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Average Percentage	1%	39%	40%	1%	3%	4%	26%	2%	28%	1%	22%	23%	28%	66%	95%
Lowest Percentage	0%	25%	25%	0%	0%	0%	22%	0%	22%	0%	13%	13%	23%	55%	80%
Highest Percentage	3%	69%	69%	5%	13%	15%	36%	13%	41%	6%	36%	36%	41%	85%	117%

[a]Only additional minors that are required for certification are included. Students may elect other minors at most institutions. Courses in the social studies major that also satisfy these requirements are excluded.

[b]These are courses outside the major or minor that are required for certification. Courses in the major or minor that also satisfy these requirements are excluded.

[c]These courses are the General University Course Requirements -- the basic skills and distribution requirements for graduation. Courses in the major, minor, or teaching core that also satisfy these requirements are excluded.

[d]These are courses offered by education departments or those offered by other departments which are described as being for teachers or about education. When the requirements permit student choice, education courses if offered and appropriate to the program were selected.

[e]These are courses which do not qualify as education courses as defined above. These percentages reflect the minimum number of non-education courses needed to meet the institutions' requirements.

[f]In some cases, the percentages of education and non-education courses do not equal the total percentage because of rounding errors.

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Appendix B.7b. Analysis of Education Course Requirements -- Secondary Certification with a Social Studies Major [a]

Institution and Program	Course Requirements as a Percentage of Total Credits for Graduation						
	Content for Teachers[b]	Foundations and Others[c]	Ed. Psych. and Human Development[d]	Curriculum, Materials and Methods[e]	Field Work Courses[f]	Student Teaching[g]	TOTALS
Central Washington University, Campus-based	0%	4%	4%	6%	2%	9%	25%
Central Washington University, Field-based	0%	1%	4%	6%	5%	9%	25%
Eastern Washington University	0%	3%	3%	10%	2%	9%	27%
University of Washington	--	--	--	--	--	--	--
Washington State University	0%	0%	3%	16%	1%	8%	28%
Western Washington University, Campus-based	0%	4%	6%	5%	0%	9%	24%
Western Washington University, Field-based	0%	2%	4%	3%	9%	9%	27%
Gonzaga University	--	--	--	--	--	--	--
Heritage College	2%	9%	5%	15%	2%	8%	41%
Northwest College	--	--	--	--	--	--	--
Pacific Lutheran University	0%	3%	3%	6%	3%	8%	23%
St. Martin's College	3%	2%	6%	7%	2%	10%	28%
Seattle Pacific University	0%	2%	2%	3%	2%	19%	28%
Seattle University	0%	4%	5%	6%	2%	6%	24%
University of Puget Sound	--	--	--	--	--	--	--
Walla Walla College	--	--	--	--	--	--	--
Whitman College	0%	7%	9%	6%	1%	8%	31%
Whitworth College	--	--	--	--	--	--	--
Average Percentage	1%	4%	5%	8%	2%	9%	28%
Lowest Percentage	0%	0%	2%	3%	0%	6%	23%
Highest Percentage	3%	9%	9%	16%	9%	19%	41%

[a] These are the same programs analyzed in the previous table.

[b] Subject matter courses, usually taught outside education departments, that are listed as specifically intended for prospective teachers. Most frequently mathematics and English courses.

[c] General introductory courses; courses in the social, philosophical, and historical foundations of education; and occasionally courses not classifiable in any other category.

[d] Required courses in psychology, whether or not they are taught within education departments.

[e] Courses in the design of instruction and in general and subject-matter-specific methods of teaching.

[f] Courses specifically and primarily focusing upon practical work with students, in schools, or in other agencies serving school-age children. Required courses listed in other categories may include field work.

[g] Courses involving students' full-time participation in schools, usually the culminating requirement of the teacher preparation sequence.